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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,325	06/30/2000	LIVIA POLANYI	106142	1764
25944	7590	07/18/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			HAN, QI	
			ART UNIT	PAPER NUMBER
			2654	

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/609,325	<b>Applicant(s)</b> POLANYI ET AL.	
	<b>Examiner</b> Qi Han	<b>Art Unit</b> 2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 and 26 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10 and 12-24 is/are rejected.
- 7) ☒ Claim(s) 3 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Response to Amendments*

2. This communication is responsive to the applicant's amendment dated 05/26/2004. Applicant amended claims 1, 3-9, 11, 13-16, 21 and 25-26 (see pages 2-7).

### *Response to Arguments*

3. Applicant's arguments regarding claim rejection (claims 1-26) under 35 USC 103 have been fully considered. The examiner made some changes in the claim rejection, for reflecting the claim amendment and applicant's arguments (see below).

In response to the applicant's arguments (regarding independent claims 1 and 16) that the prior art (Corston) "cannot reasonably be considered to disclose, teach, or suggest **selecting a theory of discourse analysis...**" (the amendment: page 9, paragraphs 3-4), the examiner has a different view of the prior art teachings and the claim interpretation. It is noted that, Corston discloses using 'discourse theory' with 'discourse structure' that 'is frequently modeled using discourse structure trees... **such as** the rhetorical structure theory trees'(Corston: col. 1, lines 12-25), which implies that 'the discourse theory' is generic term and 'the rhetorical structure theory' is a species of, a subset of, or an alternative of, 'the discourse theory'. Therefor, "selecting" a species, such as 'the rhetorical structure theory', would be reasonably read on the claimed "selecting a theory of discourse". In addition, in another view, the argued term "selecting..." can

Art Unit: 2654

also be interpreted in a determination situation between “selecting” and “not selecting”, in which selecting a single theory is still a possible step of the method and a reasonable interpretation of the claimed limitation.

Regarding dependent claims 2, 4-10, 12-15 and 17-24, the response is based on the same reason describe for claims 1 and 6, since the applicant argued the same issue (see amendment: page 10, paragraphs 1-5).

For the above reason, the applicant’s arguments regarding claims 1-2, 4-10 and 12-24 are not persuasive and the corresponding rejection is sustained.

### ***Claim Rejections - 35 USC § 103***

4. Claims 1-13, 16-18, 20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corston et al. (6,1 12,168) hereinafter referenced as Corston.

As per claim 1, Corston teaches ‘automatically recognizing the discourse structure of a body of text’ (title), comprising:

using “a theory of discourse analysis”, (col. 1, lines 12-40, ‘discourse theory’, ‘modeled using hierarchical “discourse structure trees”... such as the “rhetorical structure theory trees”’, ‘permit the application of discourse theory to the analysis of arbitrary document’);

“segmenting a text into at least one text building units based on” “the theory of discourse” (col. 1, lines 25-30); and

“analyzing each text building unit according to” the theory (col. 1, lines 42-53).

But, Corston does not explicitly disclose “selecting” the discourse theory. However, this feature is well known in the art as evidenced by Corston himself, who teaches using ‘discourse

Art Unit: 2654

theory' with 'discourse structure' that 'is frequently modeled using discourse structure trees... such as the rhetorical structure theory trees' (col. 1, lines 12-25), which implies that 'the discourse theory' is generic term and 'the rhetorical structure theory' is a species of, a subset of, or an alternative of 'the discourse theory', so that, "selecting" a species, such as 'the rhetorical structure theory', can be read on the claimed "selecting a theory of discourse". In addition, in another view, the argued term "selecting..." can also be interpreted in a determination situation between "selecting" and "not selecting", in which selecting a single theory is still a possible step of the method and a reasonable interpretation of the claimed limitation. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide selecting a theory incorporating the corresponding discourse structure, as taught by Corston, because it would provide a more friendly user system where users can have the text analyzed according to their need.

As per claim 2, Corston further discloses "one text building unit are combined into a structural representation..." (col. 1, lines 25-31).

As per claims 8-9, Corston further discloses "generating a summary of text based on the selected theory of discourse"; and "determining coverage of user designated important concepts" (col. 4, lines 22-26 and 61-64).

As per claims 12-13, Corston further discloses "segmenting is performed automatically", and "the analysis is performed automatically (col. 4, lines 17-19, 27-29, and col. 7, lines 9-41).

Art Unit: 2654

5. Claims 4-6, 10, 16-18, 20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corston in view of Takeshita et al. (5,642,520) hereinafter referenced as Takeshita.

It is noted that Corston teaches the claimed invention (see detail in the previous office actions), but does not explicitly teach displaying the segmented text. However, this feature is well known in the art as evidenced by Takeshita who teaches an apparatus for recognizing topic structure of language data disclose a display at col. 6, lines 45-46 and in figure 2, item 215 for indicating the result of the process. Therefore, one having ordinary skill in the art at the time the invention was made would have it obvious incorporate into Corston's system a display as taught by Takeshita, because it would provide a fast look up access of the result.

6. Claims 14-15, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corston in view of Takeshita and Barzilay et al. (Using Lexical Chains for text summarization) hereinafter referenced as Barzilay.

It is noted that the combination teaches the claimed invention (see detail in the previous office actions), but does not explicitly teach wherein summary generation comprises the steps of identifying the root node; recursively selecting each remaining child node; ... assigning to the subordinated node, the rank of the parent incremented by 1. However, these features are well known in the art as evidenced by Barzilay who teaches a text summarization using a chain that comprises all possible alternatives of word senses and then choose the best one among them on pages 4, figures 1-4. Therefore, one having ordinary skill in the art at the time the invention was made would have found it obvious to summarize the result text as taught by Barzilay, because it

Art Unit: 2654

would provide method of disambiguating the text and therefore would provide an accurate summary of the text.

*Allowable Subject Matter*

7. Claims 25 and 26 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding independent **claims 25 and 26**, the instant application is directed to a method and system for teaching expository writing. Each independent claim identifies the uniquely distinct features of segmenting a text into at least one text building units and analyzing each text building unit, based on the Linguistic Discourse Model theory of discourse (which is a specific discourse theory, described in specification, page 6, last paragraph; page 7, line 15 through page 10, line 23); and providing, based on the analyzed at least one text building units, objective feedback for teaching expository writing.

8. Claims 3 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowable subject matter:

Regarding **claim 3**, the instant application is directed to a method for teaching expository writing. The dependent claim, combining its parent claim limitations, identifies the uniquely distinct features of the selected theory of discourse analysis is selected from the list of at least Discourse Structures Theory, Linguistic Discourse Model [theory] (which is a specific discourse

Art Unit: 2654

theory, described in specification, page 6, last paragraph; page 7, line 15 through page 10, line 23), Rhetorical Structure Theory, Systemic Functional Grammar, and Tagmemics.

Regarding **claim 11**, it depends on claim 3 and includes all features of its parent claim(s).

9. The prior art of record, Polanyi ("the Linguistic Discourse Model: Towards a Formal Theory of Discoursed structure") Corston et al. (6,112,168), Takeshita et al. (5,642,520), Barzilay et al. ("Using Lexical Chains for text summarization"), provided numerous teachings of using discourse theory for analyzing the text content, including providing discourse structure trees, rhetorical structure theory trees, linguistic discourse model, and the related constituent segments (building units), discourse relations, and operations. However, the combined features as stated above, are not anticipated by, nor made obvious over the prior art of the record.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from



Art Unit: 2654

the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Please address mail to be delivered by the United States Postal Service (USPS) as follows:

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Effective January 14, 2005, except correspondence for Maintenance Fee payments, Deposit Account Replenishments (see 1.25(c)(4)), and Licensing and Review (see 37 CFR 5.1(c) and 5.2(c)), please address correspondence to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolater, etc.) as follows:

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (571) 272-7604. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: [ebc@uspto.gov](mailto:ebc@uspto.gov). For

Art Unit: 2654

general information about the PAIR system, see <http://pair-direct.uspto.gov>.

QH/qh  
July 13, 2005

A handwritten signature in black ink, appearing to read "David D. Knepper", with a stylized, flowing script.

DAVID D. KNEPPER  
PRIMARY EXAMINER